

# Enhancing Fishing and Fish Populations

## Stocking and Transplanting

The Wildlife Branch goes to great lengths to provide quality fishing. The pictures on the right show the magnitude of an annual event on Fort Bragg. Every year, the Intensively Managed catfish lakes are stocked with 12-16 inch channel catfish at extremely high rates. In addition, the Intensively Managed bass/bluegill lakes receive stockings of channel catfish every other year. The bottom right picture is of a 17.5 pound flathead catfish stocked in Andrews Church Lake to reduce unwanted fish.



Sometimes sterile grass carp are stocked to provide control of nuisance aquatic vegetation. Grass carp are more cost efficient than herbicides, but are not always the answer for weed control. They are very picky eaters, preferring brittle, non-fibrous plants. Grass carp also have a sense for current and sometimes migrate out of the desired pond into streams and rivers.



When a lake becomes overrun with non-desirable fish and have poor game fish populations, we will sometimes renovate a lake by eliminating all fish. Once the existing fish population is eliminated, we will stock the desired game fish species. Fingerlings (2-4 inches long) are stocked because they are relatively inexpensive. However, after fingerlings are stocked, it takes 2-4 years for the lake to open to fishing because the fish must build their numbers through reproduction and grow to harvestable sizes. Sometimes larger fish are transplanted or stocked to improve a fishery but this is very expensive.



## Habitat Manipulation

The Intensively Managed lakes on Ft Bragg receive extra efforts to maintain large numbers of game fish. Every year, these lakes receive 20-25 tons of dolomitic limestone to improve water quality. Then in the warmer months, liquid fertilizer is applied to increase the carrying capacity of the lake. The idea is that green water provides more food for zooplankton, which provides more food for small fish, which provides more food for large fish. The catfish lakes also have an artificially increased carrying capacity. We do not create green water with fertilizer, but we feed them directly with a commercial floating catfish food. A picture of one of our automatic catfish feeders is to the right.

Weed control is an important aspect to fisheries management. Too much weed growth can result in poor fish growth, decreased access, and can even contribute to fish kills. The previously mentioned sterile grass carp is used when feasible. Other techniques to control weeds are winter drawdowns and herbicides. The choice of weed control often depends on the type of weed in need of control. The pictures on the right show the 2000/2001 winter drawdown on Texas Lake to kill milfoil and McFayden Pond in 1997 before a weed control plan was implemented with herbicides. The bottom pictures show alligator weed and water primrose on McFayden Pond before and after herbicide application.

Fish attractors, like Christmas trees and tire structures, have been placed in several lakes on Ft Bragg. These structures provide habitat and concentrate fish which makes them easier to find. You may lose a few hooks in the process of finding them.



## Lake Surveys

We periodically survey the lakes on Ft Bragg to assess the fish populations and determine if management actions need to be taken. Usually, the Intensively Managed lakes are surveyed every year, and the other lakes are surveyed every 5 years, or more frequently if needed.

The fish population surveys consist of conducting a water chemistry analysis and fish sampling. We use seines to collect the small fish, trap nets to collect the larger sunfish, gill nets to collect catfish and crappie, and the electrofishing boat to collect all species, bass in particular.

The electrofisher is powered by a 5000 watt generator and sends pulses of electricity into the water to immobilize the fish. Two dippers then collect the fish and place them in aerated tubs. When the fish are collected, they are then identified, measured to the nearest millimeter, and weighed to the nearest 2 grams. All of the electrofishing is done after sunset. Large numbers of fish can result in very long nights. However, we occasionally get to see some very nice fish.

